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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,657	03/17/2004	Albert J. DeCoster	ITW7510.083	2656
33647	7590	06/26/2006	EXAMINER	
ZIOLKOWSKI PATENT SOLUTIONS GROUP, SC (ITW)			KERNS, KEVIN P	
14135 NORTH CEDARBURG ROAD			ART UNIT	
MEQUON, WI 53097			PAPER NUMBER	

1725

DATE MAILED: 06/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/708,657

**Applicant(s)**

DECOSTER ET AL.

**Examiner**

Kevin P. Kerns

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 22-54 is/are pending in the application.
- 4a) Of the above claim(s) 40-54 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-39 is/are rejected.
- 7) ☒ Claim(s) 22 is/are objected to.
- 8) ☒ Claim(s) 22-54 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/1/04</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicants' election with traverse of Group Ia (claims 22-39) in the reply filed on May 25, 2006 is acknowledged. The traversal is on the ground(s) that the applicants allege that the claim elements do not show how the combination "does not require the particulars of the subcombination as claimed for patentability (to show novelty and unobviousness)". This is not found persuasive because the combination and subcombination show two-way distinctness, as the combination claims (the cooling and welding systems) do not require that the controller (subcombination claims) have structural features that allow for the controller to be used specifically for welding systems (claim limitation details the controller for a "welding-type component" set forth in independent claim 51). Furthermore, the controller (subcombination) has separate utility for use in a wide variety of other high voltage power supplies and transformers, which are descriptive materially different combinations, such as for use in power plants, for example. As a result, two-way distinctness between the combination and subcombination claims clearly exists. Regarding the species restriction, although claim 22 is generic to Species Ia and Ib, the examiner respectfully disagrees with the applicants' assertion that the search for Species Ia would uncover the features of Species Ib, as Species Ib includes additional features that would not be uncovered in a search for the generic claim 22 of Species Ia. As a result, Species Ia and Ib are in fact drawn to different inventions. However, since the applicants elected Species Ia (claims 22-39), which include generic claim 22, the claims of Species Ib would likely be rejoined

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with Species Ia upon allowance of the generic claim. Claims 22-39 are presently under consideration in the application, with claims 40-54 being drawn to withdrawn, non-elected inventions.

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Objections***

2. Claim 22 is objected to because of the following informalities: in the 9<sup>th</sup> line, replace the deleted "[[a]]" with "a". Appropriate correction is required.

### ***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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4. Claims 22-39 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-23 of copending Application No. 10/605,546 (also see equivalent US 2005/0016979). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims include at least the following common features: a welding torch configured to present an electrode to a weld; an enclosure (welder housing); a power conditioner (power source/supply) disposed within the enclosure; a cooling system having a coolant tank and a spout disposed within the enclosure to circulate coolant through the welding torch/component via coolant hoses (providing supply and return paths for the coolant); a controller operable to control the cooling system and power conditioner; a means to automatically commence coolant circulation through the torch when the electrode is presented to the weld; a means to maintain coolant circulation until expiration of a specific time period and until a temperature falls below a certain value; a heat exchanger and water pump assembly; and at least one check valve integrated with the cooling system. One of ordinary skill in the art would have recognized that the additional features present for the welding-type system of copending Application No. 10/605,546 would selectively be present on the welder of the present application, as open-ended "comprising" language is present in the current application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

5. Claims 22-39 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 24-43 of copending Application No. 10/604,459 (also see equivalent US 2005/0016978). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims include at least the following common features: a welding torch configured to present an electrode to a weld; an enclosure (welder housing); a power conditioner (power source/supply) disposed within the enclosure; a cooling system having a coolant tank and a spout disposed within the enclosure to circulate coolant through the welding torch/component via coolant hoses (providing supply and return paths for the coolant); a controller operable to control the cooling system and power conditioner; a means to automatically commence coolant circulation through the torch when the electrode is presented to the weld; a means to maintain coolant circulation until expiration of a specific time period and until a temperature falls below a certain value; a heat exchanger and water pump assembly; and at least one check valve integrated with the cooling system. One of ordinary skill in the art would have recognized that the additional features present for the welding-type system of copending Application No. 10/604,459 would selectively be present on the welder of the present application, as open-ended "comprising" language is present in the current application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 22-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 22-28, 30, 31, and 33-38, the phrase "or the like" (in this instance, the term "type") renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like", or "type"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d). The limitations "welding-type component" (claims 22, 24-26, 28, 30, 31, 34-36, and 38), "weld-type area" (claims 22 and 30), "welding-type output" (claims 23 and 32), and "welding-type process" (claims 27 and 37) include this indefinite term. For example, what defines a "welding-type component", a "weld-type area" etc.? In addition, why wouldn't a "welding-type output" be any type of output voltage for other high voltage power supplies and transformers, such as for use in power plants?

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 22-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Prunier (FR 2 536 320) or Behnke et al. (US 2,510,207) in view of Bailey (US 5,266,778).

Prunier discloses an arc welding machine that includes a refrigeration unit for torch cooling, in which the welding machine further includes a welding torch configured to present an electrode to a weld; an enclosure (welder housing) with a base plate, side plates, end plates, and a top cover; a power conditioner (power source/supply) disposed within the enclosure; a cooling system having a coolant tank and a spout disposed within the enclosure to circulate coolant through the welding torch/component via coolant hoses (providing supply and return paths for the coolant); a controller operable to control the cooling system and power conditioner; a means to automatically commence coolant circulation through the torch when the electrode is presented to the weld; a means to maintain and terminate coolant circulation; a heat exchanger and



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water pump assembly; and at least one check valve integrated with the cooling system (abstract; translated French text of specification and claims in the paragraph bridging pages 3 and 4, the paragraph bridging pages 6 and 7, the detailed description on pages 7-11, the last two paragraphs on page 11 and bridging to page 12, claims 5 and 6; and Figure).

Also, Behnke et al. disclose a fluid control system for inert gas blanketed arc welding, in which the welding machine further includes a welding torch T with a cooling jacket J configured to present an electrode E to a workpiece to be welded W; a power conditioner (power source/supply); a cooling system having a coolant tank (manifold) and a spout operable to circulate coolant through the welding torch/component via coolant hoses (providing supply and return paths for the coolant); a controller operable to control the cooling system and power conditioner; a means to automatically commence coolant circulation through the torch when the electrode is presented to the weld; a means to maintain and terminate coolant circulation; a heat exchanger and water pump assembly; and at least one check valve integrated with the cooling system (column 1, line 1 through column 3, line 61; and Figure).

Neither Prunier nor Behnke et al. specifically discloses a means to maintain coolant circulation until expiration of a specific time period and/or until a temperature falls below a certain value (i.e. threshold, predetermined value, and/or certain set point after deactivation of the welding machine), in which one or more temperature sensors in cooperation with a dynamic control means would be required.

However, Bailey discloses a dynamic temperature control for use with a heating/cooling system having a fluid reservoir 28 including at least one temperature sensor (fluid temperature sensor 30 and remote temperature sensor 32), in which the dynamic temperature control 10 (see Figure 1) includes logic circuitry to receive temperature input signals from a control panel and at least one temperature sensor (30,32) to control the operating temperature of the fluid circulated through the fluid circulating system, and is operable to receive a temperature set point signal (column 3, lines 3-14) corresponding to a desired temperature set point from a temperature set point control 22, such that the temperature sensors in cooperation with a dynamic control means are advantageous for providing accurate, dynamic control of fluid temperature until expiration of a specific time period and/or until a temperature falls below a predetermined certain value, or set point (abstract; column 1, lines 9-11; column 2, lines 15-68; column 3, lines 1-14 and 55-68; column 4, lines 1-39 and 67-68; column 5, lines 1-2 and 40-47; and Figures 1-3).

It would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to modify either of the arc welding machines disclosed individually by Prunier and Behnke et al., by using a temperature sensor in cooperation with a control means to maintain coolant circulation while establishing a desired temperature set point, as taught by Bailey, in order to provide accurate, dynamic control of fluid temperature until expiration of a specific time period and/or until a temperature falls below a predetermined certain value, or set point (Bailey; abstract; column 1, lines 9-11; column 2, lines 15-68; and column 3, lines 1-14).

**Conclusion**

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. WO 00/44523 is also cited in PTO-892.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kevin P. Kerns whose telephone number is (571) 272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin P. Kerns *Kevin Kerns 6/22/06*  
Primary Examiner  
Art Unit 1725

*KPK*  
kpk  
June 22, 2006